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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/543,628	04/05/2000	Nancy E. Iwamoto	30-5010(4962)	6586

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EXAMINER

FEELY, MICHAEL J

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 02/26/2003

20

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/543,628

Applicant(s)

IWAMOTO, NANCY E.

Examiner

Michael J Feely

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 22-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 22-39 is/are rejected.
- 7) ☒ Claim(s) 22-39 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 April 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 10, 2002 has been entered.

### ***Claim Objections***

2. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 34-51 have been renumbered 22-39.

### ***Pending Claims***

3. Claims 22-39 are currently pending. The cancellation of claims 1-9 renders all of the previous objections and rejections moot.

### ***Claim Rejections - 35 USC § 112***

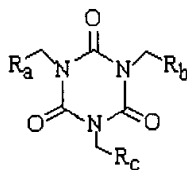
4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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5. Claims 22-39 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The claimed invention is drawn to an electronic device that comprises a component that consists of a polymer produced from at least one monomer having the formula:



wherein each of  $R_a$ ,  $R_b$ ,  $R_c$  are independently selected from the group *consisting of*: a hydroxylated aliphatic side chain, an epoxy glycol, an ethoxy ether, and glycol ether. The specification fails to demonstrate how this monomer is made, and it also fails to demonstrate how the resulting polymer is made.

Regarding the monomer, Applicant claims that  $R_a$ ,  $R_b$ ,  $R_c$  are independently selected from the group *consisting of*: a hydroxylated aliphatic side chain, an epoxy glycol, an ethoxy ether, and glycol ether. The specification is silent regarding how these substituent groups are attached to the isocyanurate ring structure. There is no discussion of starting materials or reaction mechanisms involved in the production of these monomers. In addition, it is unclear what constitutes an “epoxy glycol”. There is no discussion in the specification to provide clarification of this matter.

The description of the monomer becomes increasingly unclear in claims 23-30. The claim language discloses that  $R_a$ ,  $R_b$ ,  $R_c$  further comprises an adduct of: (23) glycol

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ether and a bisphenol glycol epoxy, (24) an epoxy glycol and an amine, (25) a glycol ether and a cycloaliphatic epoxy, or (26) hydroxyethyl side chain and a cycloaliphatic side chain. Claims 27-30 further limit the adducts set forth in claims 23-26. The limitations set forth in claims 23-30 have been interpreted to mean that in addition to containing one of: a hydroxylated aliphatic side chain, an epoxy glycol, an ethoxy ether, and glycol ether, the individual R-groups also contain one of the adducts set forth in claims 23-30.

There are a number of issues regarding these claims:

(1) The specification fails to disclose how these substituent groups are attached to the isocyanurate ring structure. There is no discussion of starting materials or reaction mechanisms involved in the production of these monomers.

(2) It is unclear if all three R-groups or select R-groups further comprise one of the adducts set forth in claims 23-30. The specification fails to provide clarification of this matter.

(3) It is unclear how an individual R-group can comprise:

a) one of: a hydroxylated aliphatic side chain; an epoxy glycol; an ethoxy ether; and glycol ether; **AND** b) one adduct of: glycol ether and a bisphenol glycol epoxy; an epoxy glycol and an amine; a glycol ether and a cycloaliphatic epoxy; or hydroxyethyl side chain and a cycloaliphatic side chain. Furthermore, there is no discussion regarding how these R groups are formed or attached to the isocyanurate ring.

Regarding the polymer, the specification is silent regarding how the polymer is formed. Other than the recitation describing the monomer structure, there is no discussion regarding a polymerization or co-polymerization mechanism. Applicant

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discloses, "As used herein, the term "monomer" refers to any chemical compound that is capable of forming a covalent bond with itself or a chemically different compound in a repetitive manner. The repetitive bond formation between monomers may lead to a linear, branched, super-branched, or three-dimensional product. Furthermore, monomers may comprise repetitive building blocks, and when polymerized the polymers formed from such monomers are termed "blockpolymers"," (page 8, lines 8-13). This disclosure is accurate, but it fails to explain how the monomers of the instant invention are polymerized. It is unclear if they are formed by addition, condensation, in the presence of a catalyst, by means of free-radical polymerization, etc. It is true that the monomers are capable of being polymerized, but this is true of all monomers. No conditions, catalysts, or reaction mechanisms are touched upon in the specification; therefore, it cannot be determined how the claimed polymer, and its resulting component are made.

Claims 31-33 further define the polymer, wherein the polymer further comprises: a bisphenol A glycidyl epoxy, a bis 3,4 epoxycyclohexyl adipate, or a trishydroxyethylisocyanurate. The Specification provides no detail regarding how these units are incorporated into the polymer structure.

Claims 34-39 are rejected because they depend on claim 22.

6. Claims 23-30 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

There is no support in the specification for an R group that contains one of: a hydroxylated aliphatic side chain; an epoxy glycol; an ethoxy ether; and glycol ether

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**AND** one of the adducts set forth in claims 23-30. The original claims and Specification (see pages 4 and 8) disclose that an individual R group can be one of these adducts; however, there is no support for an R group that combines the limitations of claim 23 with the limitations of claim 23-30.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 22-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 22-39, the phrase "selected from the group comprising" renders the claim indefinite because it fails to define the scope of the invention. See MPEP § 2173.05(h). Proper Markush language includes "consisting of" rather than "comprising".

### ***Specification***

9. The following is a quotation of the first paragraph of 35 USC §112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

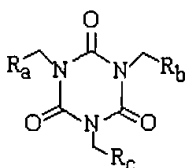
The following is a quotation of 37 CFR §1.71(a):

(a) The specification must include a written description of the invention or discovery and of the manner and process of making and using the same, and is required to be in such full, clear, concise, and exact terms as to enable any person skilled in the art or science to which the invention or discovery appertains, or with which it is most nearly connected, to make and use the same.

The specification is objected to under 37 CFR §1.71 because:

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The claimed invention is drawn to an electronic device that comprises a component that consists of a polymer produced from at least one monomer having the formula:



wherein each of  $R_a$ ,  $R_b$ ,  $R_c$  are independently selected from the group *consisting of*: a hydroxylated aliphatic side chain, an epoxy glycol, an ethoxy ether, and glycol ether. The specification fails to demonstrate how this monomer is made, and it also fails to demonstrate how the resulting polymer is made.

The specification is silent regarding how the specific R-groups are attached to the isocyanurate ring. There is no discussion of starting materials or reaction mechanisms involved in the production of these monomers.

Furthermore, there is no discussion regarding how the monomers are polymerized. As with all monomers, they are capable of polymerization; however, Applicant fails to disclose a mechanism by which polymerization is achieved.

10. The amendment filed October 10, 2002 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: new claims 23-30 teach an embodiment, wherein an individual R group of the monomer comprises an adduct of two specific compounds **AND** one of: a hydroxylated aliphatic side chain; an



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epoxy glycol; an ethoxy ether; and glycol ether. This embodiment is not disclosed in the original specification.

Applicant is required to cancel the new matter in the reply to this Office Action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Feely whose telephone number is 703-305-0268. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Dawson can be reached on 703-308-2340. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Michael J. Feely  
February 24, 2003

Robert Dawson  
Supervisory Patent Examiner  
Technology Center 1700